

10030946 01/10/2003

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|--------------|----|--------|---|
| NEWS | 1 | | Web Page URLs for STN Seminar Schedule - N. America |
| NEWS | 2 | | "Ask CAS" for self-help around the clock |
| NEWS | 3 | SEP 09 | CA/CAPLUS records now contain indexing from 1907 to the present |
| NEWS | 4 | Jul 15 | Data from 1960-1976 added to RDISCLOSURE |
| NEWS | 5 | Jul 21 | Identification of STN records implemented |
| NEWS | 6 | Jul 21 | Polymer class term count added to REGISTRY |
| NEWS | 7 | Jul 22 | INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available |
| NEWS | 8 | AUG 05 | New pricing for EUROPATFULL and PCTFULL effective August 1, 2003 |
| NEWS | 9 | AUG 13 | Field Availability (/FA) field enhanced in BEILSTEIN |
| NEWS | 10 | AUG 15 | PATDPAFULL: one FREE connect hour, per account, in September 2003 |
| NEWS | 11 | AUG 15 | PCTGEN: one FREE connect hour, per account, in September 2003 |
| NEWS | 12 | AUG 15 | RDISCLOSURE: one FREE connect hour, per account, in September 2003 |
| NEWS | 13 | AUG 15 | TEMA: one FREE connect hour, per account, in September 2003 |
| NEWS | 14 | AUG 18 | Data available for download as a PDF in RDISCLOSURE |
| NEWS | 15 | AUG 18 | Simultaneous left and right truncation added to PASCAL |
| NEWS | 16 | AUG 18 | FROSTI and KOSMET enhanced with Simultaneous Left and Right Truncation |
| NEWS | 17 | AUG 18 | Simultaneous left and right truncation added to ANABSTR |
| NEWS | 18 | SEP 22 | DIPPR file reloaded |
| NEWS | 19 | SEP 25 | INPADOC: Legal Status data to be reloaded |
| NEWS | 20 | SEP 29 | DISSABS now available on STN |
| NEWS EXPRESS | | | April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003 |
| NEWS HOURS | | | STN Operating Hours Plus Help Desk Availability |
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| NEWS LOGIN | | | Welcome Banner and News Items |
| NEWS PHONE | | | Direct Dial and Telecommunication Network Access to STN |
| NEWS WWW | | | CAS World Wide Web Site (general information) |

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10030946 01/10/2003

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* * * * * STN Columbus * * * * *

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=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'CAPLUS' ENTERED AT 06:53:09 ON 01 OCT 2003

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FILE COVERS 1907 - 1 Oct 2003 VOL 139 ISS 14

FILE LAST UPDATED: 30 Sep 2003 (20030930/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s keton? and reducti?(l)amination

196390 KETON?

329435 REDUCTI?

783204 REDN

41806 REDNS

809311 REDN

(REDN OR REDNS)

974382 REDUCTI?

(REDUCTI? OR REDN)

26290 AMINATION

274 AMINATIONS

26339 AMINATION

(AMINATION OR AMINATIONS)

5674 REDUCTI?(L)AMINATION

L1

629 KETON? AND REDUCTI?(L)AMINATION

=> l1 and homogene?(l)catalyst?

L1 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s l1 and homogenous?(l)catalyst?

4780 HOMOGENOUS?

817073 CATALYST?

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10030946 01/10/2003

295 HOMOGENOUS? (L) CATALYST?

L2 0 L1 AND HOMOGENOUS? (L) CATALYST?

=> s l1 and catalyst?

817073 CATALYST?

L3 179 L1 AND CATALYST?

=> s l3 and amine?

369510 AMINE?

L4 128 L3 AND AMINE?

=> s l4 and ligand

245753 LIGAND

166463 LIGANDS

335707 LIGAND

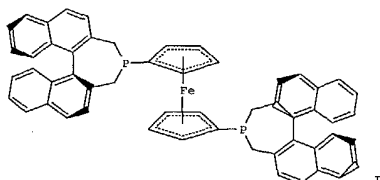
(LIGAND OR LIGANDS)

L5 13 L4 AND LIGAND

=> d ibib abs hitstr tot

10030946 01/10/2003

15 ANSWER 1 OF 13 CAPIUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 2003:292432 CAPIUS
 DOCUMENT NUMBER: 139:36286
 TITLE: Highly Enantioselective Reductive
 Amination of Simple Aryl Ketones
 Catalyzed by Ir-f-Binaphane in the Presence of
 Titanium(IV) Isopropoxide and Iodine
 Chi, Yongxiang; Zhou, Yong-Gui; Zhang, Xumu
 Department of Chemistry, Pennsylvania State
 University, University Park, PA, 16802, USA
 Journal of Organic Chemistry (2003), 68(10),
 CODEN: JOCEAH; ISSN: 0022-3263
 American Chemical Society
 PUBLISHER: Journal
 DOCUMENT TYPE: English
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 139:36286
 GI



AB Secondary aralkyl amines are prepd. in >99% yields and in 44-96%
 es from p-anisidine and aryl alkyl ketones by treatment with
 titanium tetraisopropoxide, iodine, and an iridium catalyst
 prepd. from [Ir(.eta.⁴-1,5-COD)Cl]₂ and the nonracemic ligand
 f-Binaphane I. Deprotection of the N-(4-methoxyphenyl) moiety of
 N-(4-methoxyphenyl)-(R)-.alpha.-methylbenzylamine with ceric ammonium
 nitrate yields (R)-.alpha.-methylbenzylamine in 81% yield. Nonracemic
 aralkyl amines can be prepd. in two steps from aralkyl
 ketones without competing reduct. of the ketone to the
 secondary alc.
 REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
 FORMAT

15 ANSWER 2 OF 13 CAPIUS COPYRIGHT 2003 ACS on STN (Continued)
 RECORD. ALL CITATIONS AVAILABLE IN THE RE
 FORMAT

15 ANSWER 2 OF 13 CAPIUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 2002:435742 CAPIUS
 DOCUMENT NUMBER: 137:256779
 TITLE: Towards co-operative reactivity in conjoint
 classical-organometallic heterometallic complexes:
 the coordination chemistry of novel ligands with
 triphenylphosphine and bis(pyridylethyl)amine
 or triazacyclononane domains
 Watkins, Scott E.; Craig, Donald C.; Colbran, Stephen
 B.
 CORPORATE SOURCE: School of Chemical Sciences, The University of New
 South Wales, Sydney, 2052, Australia
 SOURCE: Journal of the Chemical Society, Dalton Transactions
 (2002), (12), 2423-2436
 CODEN: JCSDAH; ISSN: 1472-7773
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB With a view towards later studies of cooperativity in heteronuclear
 complexes with hard classical (oxygen-activating) and soft organometallic
 (org.-substrate binding) metal centers, four novel ditopic N3P-donor
 ligands (L1-L4), each comprising 2- or 3-
 (diphenylphosphino)phenylmethyl tethered to N,N'-bis(2-pyridyl-2-ethyl)
 amine (bpea, L1, L3) or 1,4-diisopropyl-1,4,7-triazacyclononane
 (tacn*, L2, L4) N3-donor group, were designed and prepd. by
 reductive amination of ortho- and meta-
 (diphenylphosphino)benzaldehydes with bpea (for L1 and L3) and tacn* (for
 L2 and L4). A range of .kappa.Nn, .kappa.P-chelate mononuclear complexes
 were isolated from the reactions of the ortho-substituted ligands
 , L1 and L2, with Cu(I), Zn(II) and Pt(II) sources, and the x-ray crystal
 structure of [Cu(L1)](PF6) and [PtCl(L1)](PF6) were detd. Six complexes
 with the phosphine of L1-L4 coordinated to a softer [Pt(II), Ir(I) or
 W(0)] metal center and with dangling, metal-free N3-donor domains were
 prepd.: for the ortho-substituted ligands L1 and L2, it was
 necessary to protect the hard, more basic N3-donor domains by protonation
 (pH control) to prevent formation of .kappa.Nn, .kappa.P-chelate
 mononuclear complexes; for the meta-substituted ligands L3 and
 L4, pH control was unnecessary as the phosphine group selectively binds
 to the softer metal ions. Trans-[IrCl(CO)(L3)]₂ reversibly forms a dioxygen
 adduct. An Ir(III)Cu(II)2 and four Pt(II)Cu(II)2 heterometallic
 complexes
 were prepd. by adding hard Cu(II) ions to the Ir(I) and Pt(II) complexes
 with metal-free N3-donor domains, and the full characterization of these
 is described. The tungsten(0) carbonyl complex [W(CO)5(L3)], with a
 metal-free N3-bpea domain, was prepd. for a study of metal ion
 recognition. No perturbation of the carbonyl region of the IR spectrum
 was obsd. when metal ions were added. The effect of submolar quantities
 of heterometallic complexes, obtained by adding a 1st d-series metal(II)
 ion (2 equiv) to [IrCl(CO)(L3)]₂, on the oxidn. of styrene by oxygen in
 methyl ethyl ketone was assayed: inhibition of the oxidn. is
 obsd. with the % conversion and the product selectivity dependent on the
 metal(II) ion.
 REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR
 THIS

15 ANSWER 3 OF 13 CAPIUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 2001:439174 CAPIUS
 DOCUMENT NUMBER: 135:244060
 TITLE: Improved separation processes of catalyst
 residues from formyl ester products
 Inventor(s): Argyropoulos, John Nicholas; Kanel, Jeffrey Scott;
 Tulchinsky, Michael Leo; Miller, David James;
 Morrison, Donald Lee; Foley, Paul; Bryant, David
 Robert
 PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology
 Corporation, USA
 SOURCE: PCT Int. Appl., 84 pp.
 CODEN: PIXXDZ
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2001068252 | A2 | 20010920 | WO 2001-US8181 | 20010314 |
| WO 2001068252 | A3 | 20030904 | | |
| W: AE, AL, AM, AT, AU, A2, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GN, GW, ML, NR, NE, SN, TD, TG | | | | |
| US 6303830 | B1 | 20011016 | US 2000-526638 | 20000315 |
| NO 2002004357 | A | 20021025 | NO 2002-4357 | 20020912 |
| PRIORITY APPLN. INFO.: | | | US 2000-526638 | A 20000315 |
| | | | WO 2001-US8181 | W 20010314 |

OTHER SOURCE(S): MARPAT 135:244060
 AB A continuously generated reaction product fluid comprising .gtoreq.1
 unreacted reactants, a metal-organophosphorus ligand complex
 catalyst, optionally free organophosphorus ligand,
 .gtoreq.1 organophosphorus ligand degradn. products, .gtoreq.1
 reaction byproducts, .gtoreq.1 formyl products, .gtoreq.1 nonpolar
 solvents, and .gtoreq.1 polar solvents undergoes phase separ. where (i)
 the selectivity of the polar phase for the organophosphorus ligand
 with respect to the .gtoreq.1 products is expressed by a partition coeff.
 ratio, E1f, .gtorsim.2.5, (ii) the selectivity of the polar phase for the
 organophosphorus ligand with respect to the .gtoreq.1
 organophosphorus ligand degradn. products is expressed by a
 second partition coeff. ratio, E2f, .gtorsim.2.5, and (iii) the
 selectivity of the polar phase for the organophosphorus ligand
 with respect to the .gtoreq.1 reaction byproducts is expressed by a third
 partition coeff. ratio, E3f, .gtorsim.2.5 (no data).

10030946 01/10/2003

L5 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2003 ACS ON STN
ACCESSION NUMBER: 2001:693173 CAPLUS
DOCUMENT NUMBER: 135:244059
TITLE: Improved separation processes of catalyst residues from products
INVENTOR(S): Kanel, Jeffrey Scott; Argyropoulos, John Nicholas; Phillips, Ailene Gardner; Roesch, Brian Michael; Briggs, John Robert; Lee, Min Max; Maher, John Michael; Bryant, David Robert
PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology Corporation, USA
SOURCE: PCT Int. Appl., 64 pp.
CODEN: FIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|------------|
| WO 2001068251 | A2 | 20010920 | WO 2001-US8180 | 20010314 |
| WO 2001068251 | A3 | 20020131 | | |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| US 6303829 | B1 | 20011016 | US 2000-526434 | A 20000315 |

PRIORITY APPLN. INFO.:
OTHER SOURCE(S):
AB This invention relates to metal-organophosphorus ligand complex catalyzed process in which the desired product, along with any organophosphorus ligand degradn. products and reaction byproducts are selectively extd. and sepd. from the reaction product fluid by fractional countercurrent extn. The process for sepg. .gtoreq.1 products from a reaction product fluid comprising a metal-organophosphorus ligand complex catalyst, optionally free organophosphorus ligand, .gtoreq.1 nonpolar reaction solvents and .gtoreq.1 polar reaction solvents, comprises (i) subjecting the reaction product fluid to fractional countercurrent extn. with at least two immiscible extn. solvents comprising .gtoreq.1 nonpolar extn. solvent and .gtoreq.1 polar extn. solvent, to obtain a nonpolar phase and (2) recovering the polar phase from nonpolar phase wherein (i) the organophosphorus ligand has a partition coeff. Kp1 defined between the nonpolar phase and the polar phase of greater than about 5, and (ii) .gtoreq.1 products have a partition coeff. Kp2 defined herein between the nonpolar phase and the polar phase of less than about 2.0 (no data).

L5 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2003 ACS ON STN (Continued)
the selectivity of the nonpolar phase for the organophosphorus ligand with respect to the .gtoreq.1 reaction byproducts is expressed by a third partition coeff. ratio, EF3, .gtorsim.2.5 (no data).

L5 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2003 ACS ON STN
ACCESSION NUMBER: 2001:693172 CAPLUS
DOCUMENT NUMBER: 135:244058
TITLE: Improved separation processes of catalyst residues from products
INVENTOR(S): Argyropoulos, John Nicholas; Kanel, Jeffrey Scott; Tulchinsky, Michael Leo; Miller, David James; Morrison, Donald Lee; Foley, Paul; Bryant, David Robert; Phillips, Ailene Gardner; Roesch, Brian Michael; Briggs, John Robert; Lee, Min Max; Maher, John Michael
PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology Corporation, USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: FIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2001068250 | A2 | 20010920 | WO 2001-US8173 | 20010314 |
| WO 2001068250 | A3 | 20020131 | | |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| US 6307110 | B1 | 20011023 | US 2000-526337 | 20000315 |
| BR 2001009216 | A | 20021203 | BR 2001-9216 | 20010314 |
| EP 1265830 | A2 | 20021218 | EP 2001-918667 | 20010314 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| JP 2003526690 | T2 | 20030909 | JP 2001-566800 | 20010314 |
| NO 2002004359 | A | 20021113 | NO 2002-4359 | 20020912 |

PRIORITY APPLN. INFO.:
OTHER SOURCE(S):
AB A continuously generated reaction product fluid comprising .gtoreq.1 unreacted reactants, a metal-organophosphorus ligand complex catalyst, optionally free organophosphorus ligand, .gtoreq.1 organophosphorus ligand degradn. products, .gtoreq.1 reaction byproducts, .gtoreq.1 cyclic products, .gtoreq.1 nonpolar solvents, and .gtoreq.1 polar solvents undergoes phase sepn., where (i) the selectivity of the nonpolar phase for the organophosphorus ligand with respect to the .gtoreq.1 products is expressed by a partition coeff. ratio, EF1, .gtorsim.2.5, (ii) the selectivity of the nonpolar phase for the organophosphorus ligand with respect to the .gtoreq.1 organophosphorus ligand degradn. products is expressed by a second partition coeff. ratio, EF2, .gtorsim.2.5, and (iii)

L5 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2003 ACS ON STN
ACCESSION NUMBER: 2001:693171 CAPLUS
DOCUMENT NUMBER: 135:244057
TITLE: Improved separation processes of catalyst residues from products
INVENTOR(S): Argyropoulos, John Nicholas; Kanel, Jeffrey Scott; Tulchinsky, Michael Leo; Miller, David James; Morrison, Donald Lee; Foley, Paul; Bryant, David Robert; Phillips, Ailene Gardner; Roesch, Brian Michael; Briggs, John Robert; Lee, Min Max; Maher, John Michael
PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology Corporation, USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: FIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2001068249 | A2 | 20010920 | WO 2001-US8156 | 20010314 |
| WO 2001068249 | A3 | 20020328 | | |
| W: | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | |
| US 6310260 | B1 | 20011030 | US 2000-526191 | 20000315 |
| EP 1265831 | A2 | 20021218 | EP 2001-922386 | 20010314 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| BR 2001009223 | A | 20030408 | BR 2001-9223 | 20010314 |
| JP 2003526689 | T2 | 20030909 | JP 2001-566799 | 20010314 |
| NO 2002004358 | A | 20021113 | NO 2002-4358 | 20020912 |

PRIORITY APPLN. INFO.:
OTHER SOURCE(S):
AB A continuously generated reaction product fluid comprising .gtoreq.1 unreacted reactants, a metal-organophosphorus ligand complex catalyst, optionally free organophosphorus ligand, .gtoreq.1 organophosphorus ligand degradn. products, .gtoreq.1 reaction byproducts, .gtoreq.1 cyclic products, .gtoreq.1 nonpolar solvents, and .gtoreq.1 polar solvents undergoes phase sepn., where (i) the selectivity of the polar phase for the organophosphorus ligand with respect to the .gtoreq.1 products is expressed by a partition coeff. ratio, EF1, .gtorsim.2.5, (ii) the selectivity of the polar phase for the organophosphorus ligand with respect to the .gtoreq.1 organophosphorus ligand degradn. products is expressed by a second partition coeff. ratio, EF2, .gtorsim.2.5, and (iii) the selectivity of the polar phase for the organophosphorus ligand with respect to the .gtoreq.1 reaction byproducts is expressed by a third partition coeff. ratio, EF3, .gtorsim.2.5 (no data).

L5 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:693170 CAPLUS
DOCUMENT NUMBER: 135:244056
TITLE: Improved separation processes of catalyst
residues from products
INVENTOR(S): Kanel, Jeffrey Scott; Argyropoulos, John Nicholas;
Phillips, Ailene Gardner; Roesch, Brian Michael;
Briggs, John Robert; Lee, Min Max; Maher, John
Michael; Bryant, David Robert
PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology
Corporation, USA
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-------------------|-----------------|----------|
| WO 2001068248 | A2 | 20010920 | WO 2001-US40287 | 20010314 |
| WO 2001068248 | A3 | 20020131 | | |
| W: AE, AL, AM, AT, AU, ES, DE, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CE, DL, DK, DM, EE, ES, FI, FG, GD, GE, GH, GW, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LI, LU, LT, LV, MA, MD, MG, MK, MN, MW, MX, NC, NE, NZ, NO, NZ, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MT, SD, SI, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CT, CM, GA, GN, GW, NL, MR, NE, SN, TD, TG | | | | |
| US 6294700 | B1 | 20010925 | US 2000-526636 | 20000315 |
| PRIORITY/AU INFO: | | US 2000-526636 | A | 20000315 |
| OTHER SOURCE/LN: | | MARPAT 135:244056 | | |

This invention relates to metal-organophosphorus **ligand** complex catalyzed process in which the desired product, along with any organophosphorus **ligand** degradn. products and reaction byproducts are selectively extd. and sepd. from the reaction product fluid by fractional countercurrent extn. The process for sepg. **gtoreq1** products from a reaction product fluid comprising a metal-organophosphorus **ligand** complex catalyst, optionally free organophosphorus, and **gtoreq1** nonpolar reaction solvents and **gtoreq1** polar reaction solvents, comprises (1) subjecting the reaction product fluid to fractional countercurrent extn. with at least two immiscible extn. solvents comprising **gtoreq1** nonpolar extn. solvent and **gtoreq1** polar extn. solvent, to obtain a nonpolar phase and (2) recovering the polar phase from nonpolar phase wherein (1) the organophosphorus **ligand** has a partition coeff. **Kpl** defined between the nonpolar phase and the polar phase of greater than about 5, and (ii) **gtoreq1** products have a partition coeff. **Kpd** defined herein between the nonpolar phase and the polar phase of less than about 2.0 (no data).

Kamal Saeed

L5 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:693169 CAPLUS
DOCUMENT NUMBER: 15:244055
INVENTOR(S): Improved separation processes
Kanel, Jeffrey Scott; Bryant, David Robert; Roesch,
Brian Michael; Phillips, Ailene Gardner
PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics, USA
SOURCE: PCV Int. Appl., 72 pp.
CODEN: PFXDX2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2001068247 | A2 | 20010920 | WO 2001-US40286 | 20010314 |
| WO 2001068247 | A3 | 20020307 | | |
| W: AE, AL, AM, AT, AU, A2, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, | | | | |
| CZ, DE, DK, DM, EE, ES, FT, GB, GD, GE, GH, GR, HU, ID, IL, | | | | |
| IN, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MA, | | | | |
| MD, MG, MK, MN, MW, MX, NA, NZ, NL, PL, PT, RO, RU, SD, SE, SG, SI, | | | | |
| SK, SL, TJ, TR, TT, TZ, UA, UG, UY, VN, YU, ZA, ZW, AM, AZ, | | | | |
| BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, ME, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, | | | | |
| DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, | | | | |
| BJ, CF, CG, CI, CM, GA, GN, GM, ML, NE, NG, SN, TD, TG | | | | |
| US 6307109 | B1 | 20011223 | US 2000-526039 | 20000315 |
| EP 1265932 | A2 | 20010128 | EP 2001-927398 | 20010314 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IL, IN, NL, SE, MC, PT, | | | | |
| IE, SI, LT, LU, PT, RO, MK, CY, AL, TR | | | | |
| JP 2003526689 | T2 | 20030909 | JP 2001-566797 | 20010314 |
| PRIORITY APPLN. INFO.: US 2000-526039 A 20000315 | | | | |
| WO 2001-US40286 W 20010314 | | | | |

OTHER SOURCE(S): MARPAT 135:244055

AB This invention relates to metal-organophosphorus ligand complex catalyzed processes in which the desired product, along with any organophosphorus ligand degradn. products and reaction byproducts are selectively extd. and sepd. from the reaction product fluid by phase sepn. The process for sepn. .gtoreq.1 products from a reaction product fluid comprising a metal-organophosphorus ligand complex catalyst, optionally free organophosphorus ligand, .gtoreq.1 products, .gtoreq.2 nonpolar reaction solvents, .gtoreq.1 polar reaction solvents comprises (1) supplying the reaction product fluid from a reaction zone to a sepn. zone, (2) controlling concn. of .gtoreq.1 nonpolar reaction solvents and .gtoreq.1 polar reaction solvents, temp. and pressure in sepn. zone sufficient to obtain phase sepn. of two immiscible liquid phases, (3) recovering polar phase from nonpolar phase or nonpolar phase from polar phase.

15 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:162323 CAPLUS
TITLE: Titanium isopropoxide catalyzed **reductive amination** reactions on solid support.
AUTHOR(S): DiCesare, John C.; McGee, Celesta E.; Black, Holly B.
Rasmussen, Wendy E.
CORPORATE SOURCE: Department Chemistry, University Tulsa, Tulsa, OK, 74104, USA
SOURCE: Book of Abstracts, 213th ACS National Meeting, San Francisco, April 13-17 (1997), ORGN-061. American Chemical Society: Washington, D. C.
CODEN: 64AOAA
DOCUMENT TYPE: Conference: Meeting Abstract
LANGUAGE: English
AB As part of a program directed toward the synthesis of **ligands** for a combinatorial library, we were interested in prepg. **amines** derived from the **reductive amination** of hindered **ketones** and/or weakly basic **amines**. A key step in the planned synthetic pathway is the **reductive amination** of an aryl **amine** and a piperidone deriv. Mattson and co-workers (J. Org. Chem., 1990, 55, 2552) reported that the **amines** could be accessed by using a modified Borch redn. using titanium (IV) isopropoxide as a **catalyst**. A thorough understanding of the reaction mechanism is beneficial in detg. the optimum reaction conditions needed for solid phase combinatorial synthesis. Results from the mechanistic study were utilized to adapt the modified **reductive amination** procedure to the solid phase synthesis used in combinatorial chem.

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L5 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1996:744310 CAPLUS
 DOCUMENT NUMBER: 126:60123
 TITLE: Palladium alkoxides: potential intermediacy in catalytic amination, reductive elimination of ethers, and catalytic etheration. Comments on alcohol elimination from Ir(III) Mann, Grace; Hartwig, John F.
 AUTHOR(S): Department of Chemistry, Yale University, New Haven, CT, 06520-8107, USA
 CORPORATE SOURCE: Journal of the American Chemical Society (1996), 118(51), 13109-13110
 SOURCE: CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 126:60123
 AB Two types of late transition metal alkoxides or hydroxides were prepd. to test their ability to undergo reductive elimination of ethers or alcs. and their ability to undergo N-H activation to produce amido intermediates in Pd-catalyzed amination of aryl halides. The Pd(II) alkoxide complex, [(DPPF)Pd(p-C6H4-t-Bu)(O-t-Bu)], was prepd. and isolated in pure form. It reacted with diarylamine, aniline, and alkylamine to produce [(DPPF)Pd(p-C6H4-t-Bu)(NRR')] complexes that underwent reductive elimination of arylamines. [(DPPF)Pd(p-C6H4-t-Bu)(O-t-Bu)] resisted reductive elimination of ether, but the analogs with electron withdrawing groups in the p-position of the aryl group underwent rapid C-O bond forming reductive elimination of ethers at room temp. [(DPPF)Pd(p-C6H4-C(O)H)(O-t-Bu)] was generated by addn. of NaO-t-Bu to the aryl bromide complex. It was isolated free of NaO-t-Bu, and its reductive elimination of aryl ether was obsd. directly. As a result of this reductive elimination chem., the catalytic addn. of NaO-t-Bu to p-H(O)CC6H4Br, p-NCC6H4Br, and PhC(O)C6H4Br was conducted with 58-69% yields by using a combination of either Pd(dba)2 and DPPF, or Pd(PPh3)4 and DPPF. DPPF was only slightly less effective in the catalysis, but BINAP, DPPF, and DPPE either gave incomplete conversion or poor ratios of arene:ether. Alkoxides contg. .beta.-hydrogens were also inefficient in forming alkylaryl ethers. The Ir(III) hydroxo complex, [Ir(CO)(PPh3)2(OH)(Me)] (I), was prepd. and characterized fully. In contrast to previous reports of the P(p-tol)3-analog, this complex was stable at room temp. It did not undergo reductive elimination of MeOH, but rather reacted with CD3I to produce CD3OH. The crystal and mol. structures of [(DPPF)Pd(p-C6H4-t-Bu)(O-t-Bu)], [(DPPF)Pd(p-C6H4-t-Bu)(N(tol)2)], and [Ir(CO)(PPh3)2(OH)(Me)] (I) were detd. by x-ray crystallog. (data available in supporting information).

L5 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1992:447998 CAPLUS
 DOCUMENT NUMBER: 117:47998
 TITLE: Enantioselective hydrogenation of the C:N group: a catalytic asymmetric reductive amination procedure
 AUTHOR(S): Burk, Mark J.; Feaster, John E.
 CORPORATE SOURCE: Cent. Res. Dev. Dep., E. I. du Pont de Nemours and Co., Wilmington, DE, 19880-0328, USA
 SOURCE: Journal of the American Chemical Society (1992), 114(15), 6266-7
 CODEN: JACSAT; ISSN: 0002-7863
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A new 3-step catalytic procedure for the highly enantioselective reductive amination of prochiral ketones was developed. A series of ketones was converted to the corresponding N-acylhydrazones, which were then hydrogenated asym. with cationic Rh-based catalysts bearing the new chiral 1,2-bis(phospholano)benzene (DuPHOS) ligands. Enantioselectivities of .ltoreq.97% ee were achieved with Et-DuPHOS. Treating the resulting N-acylhydrazones with SmI2 (.gtoreq.2 equiv) led to reductive N-N bond cleavage and afforded the free amines with no loss of optical purity. Competition expts. with assorted functional compds. showed extremely high levels of chemoselectivity in the asym. hydrogenation of N-acylhydrazones.

L5 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1988:45454 CAPLUS
 DOCUMENT NUMBER: 108:55454
 TITLE: Iridium complexes of optically active styrene derivative polymers as enantioselective catalysts
 INVENTOR(S): Kaschig, Juergen
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
 SOURCE: Eur. Pat. Appl., 50 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| EP 251994 | A1 | 19880107 | EP 1987-810297 | 19870511 |
| US 4800224 | A | 19890124 | US 1987-47099 | 19870508 |
| CA 1305153 | A1 | 19920714 | CA 1987-537148 | 19870514 |
| JP 63119465 | A2 | 19880524 | JP 1987-118129 | 19870516 |
| JP 2614614 | B2 | 19970528 | | |
| US 4891412 | A | 19900102 | US 1988-258368 | 19881017 |
| US 4904790 | A | 19900227 | US 1988-258369 | 19881017 |
| US 4954592 | A | 19900904 | US 1989-419792 | 19891011 |
| US 4983739 | A | 19910108 | US 1989-454321 | 19891221 |
| PRIORITY APPLN. INFO.: | | | CH 1986-1985 | 19860516 |
| | | | US 1987-47099 | 19870508 |
| | | | US 1988-258368 | 19881017 |
| | | | US 1988-258369 | 19881017 |

OTHER SOURCE(S): MARPAT 109:55454
 AB Ir(I) complexes of the optically active styrene derivs. p-R1R2CHCH6H4CH:CH2 (R1 = alkyl, Ph, PhCH2; R2 = 2-CSH4NCH2N-, 2-CSH4NCH2NH-, or their 6-Me derivs.; or R1 + R2 form a 4-phenyl-1,3-dioxanyl group) form polymers useful as enantioselective catalysts, e.g. for transfer hydrogenation of prochiral ketones. ATRN-initiated polymn. of 0.2504 g N-(6-methyl-2-pyridylmethylene)-1-(4-vinylphenyl)ethylamine ([.alpha.].D20 +21.6.degree., prepd. in 88% yield from the amine and 6-methyl-2-pyridinecarboxaldehyde) with 1.979 g styrene at 70.degree. gave 1.03 g copolymer (I) with [.alpha.].D23 +0.44.degree. and ligand capacity 0.499 mmol/g. Stirring 89.3 mg di-.mu.-chloro(cyclooctene)diiridium(I) tetrafluoroborate and 1.2 mL 1,5-hexadiene in 5 mL C6H6 for 30 min at room temp., adding 400 mg I in 5 mL C6H6, and stirring 1 h gave a polymer Ir complex. Using 5.5 mL soln. (0.01766 mmol mer unit/mL) of this polymer in the transfer hydrogenation of 1-phenylbutanone (60.degree., 19 h) in iso-PrOH gave 12.4% 1-phenylbutanol with a 42.2% excess of the R-isomer.

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| 51.01 | 51.22 |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| -8.46 | -8.46 |

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